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1. A method of producing a quadrifilar antenna for circularly polarised radiation at frequencies above 200 MHz, the antenna comprising a plurality of substantially helical conductive radiating tracks located on an electrically insulative substrate, wherein the method comprises monitoring at least one electrical parameter of the antenna and removing conductive material from at least one of the tracks to bring the monitored parameter nearer to a predetermined value, thereby to increase the inductance of the track.
2. A method according to claim 1, wherein the conductive material is removed from the track by laser etching an aperture in the track, leaving the edges of the track intact on either side of the aperture.
3. A method according to claim 1 for producing an antenna in which the substrate is substantially cylindrical and the tracks include portions on a cylindrical surface of the substrate and a flat surface of the substrate, e.g. an end surface substantially perpendicular to the cylinder axis, wherein the conductive material is removed from a track portion or portions located on the flat surface.
4. A method according to claim 1 for producing an antenna having a plurality of helical track portions located in a substantially cylindrical substrate surface, and a plurality of respective connecting track portions located on a substantially flat end surface of the substrate to connect the helical track portions to an axial feeder, wherein the material removal step comprises forming a cut-out in at least one of the connecting track portions.
5. A method according to claim 1, wherein the monitoring step comprises coupling the antenna to a radio frequency source, bringing probes into juxtaposition with the tracks at predetermined locations, and measuring at least the relative phases of signals picked up by the probes associated with different respective tracks when the radio frequency source is operated.

6. A method according to claim 5, wherein the probes are capacitively coupled to the respective tracks.
7. A method according to claim 5, wherein the probes are located in registry with track portions corresponding to the positions of voltage minima when the radio frequency source is tuned to the intended operating frequency of the antenna.
8. A method according to claim 5, wherein the probes are located in registry with end portions of the helical tracks.
9. A method according to claim 5 for producing an antenna in which each track has a first end portion adjacent a feed location and a second, opposite end portion spaced from the said feed location, wherein the material removal step comprises forming cut-outs in the first end portions and the monitoring step includes positioning the probes in juxtaposition with the second end portions.
10. A method according to claim 1, wherein material is removed from the tracks by forming a rectangular aperture in the or each affected track, the aperture having a predetermined width transverse to the direction of the track which is computed automatically in response to the result of the monitoring step.
11. A method according to claim 10, wherein with the width and length of the aperture are variable in response to the said monitoring result.
12. A method according to claim 1, wherein the monitoring step includes feeding the antenna with a swept frequency signal over a frequency range including the intended operating frequency of the antenna, monitoring the relative phases and amplitudes of signals in the radiating tracks, and removing conductive material from at least two of the tracks to bring the frequency at which substantial phase orthogonality occurs closer to the intended operating frequency.

13. A method according to claim 1, wherein the monitoring step includes feeding the antenna with a swept frequency signal over a frequency range including the intended operating frequency of the antenna, monitoring the relative phases and amplitudes of signals in the radiating tracks to bring the difference between the monitored phases at a central resonant frequency nearer to 90°.

14. A quadrifilar antenna for circularly polarised radiation at frequencies above 200 MHz, comprising a plurality of substantially helical conductive tracks located on an electrically insulative substrate, wherein at least one of the tracks has a cut-out of predetermined size for increasing the inductance of the track.

15. An antenna according to claim 14, wherein the cut-out comprises an aperture located between the opposing edges of the track.

16. An antenna according to claim 14, wherein the substrate comprises an antenna core formed of a solid dielectric material having a relative dielectric constant greater than 10, the tracks being arranged so as to define an interior volume the major part of which is occupied by the solid material of the core, wherein the substrate has curved outer surface portions and flat surface portions supporting the said tracks, and wherein the or each said cut-out is formed where the respective track lies over a flat surface portion.

17. An antenna according to claim 14, comprising: a substantially cylindrical core formed of a dielectric material with a dielectric constant greater than 10, the core defining an axis of the antenna and having a substantially cylindrical outer surface and a pair of end faces, wherein the tracks comprise axially co-extensive outer portions on the substantially cylindrical surface and connecting portions on one of the end faces to connect the outer portions to an axial feed point on that end face, wherein the antenna further comprises an axial feed structure passing through the core from the said one end face to the other end face, and a conductive balun sleeve encircling the core and extending from the feeder structure on the said other end face to a rim which is at an axial position between the end faces and is connected to the outer track portions, and

wherein the or each cut-out is in the connecting portion of the respective track or in the outer portion of the respective track at a location adjacent its connection to the sleeve rim.

- 5 18. An antenna according to claim 17, wherein the outer track portions comprise two pairs of helices, the helices of one pair having a different electrical length from the helices of the other pair, and wherein each of the tracks of at least one of the pairs has a cut-out.

- 10 19. An antenna according to claim 18, wherein each cut-out is an aperture of predetermined size in the connecting portion of the respective track.

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